

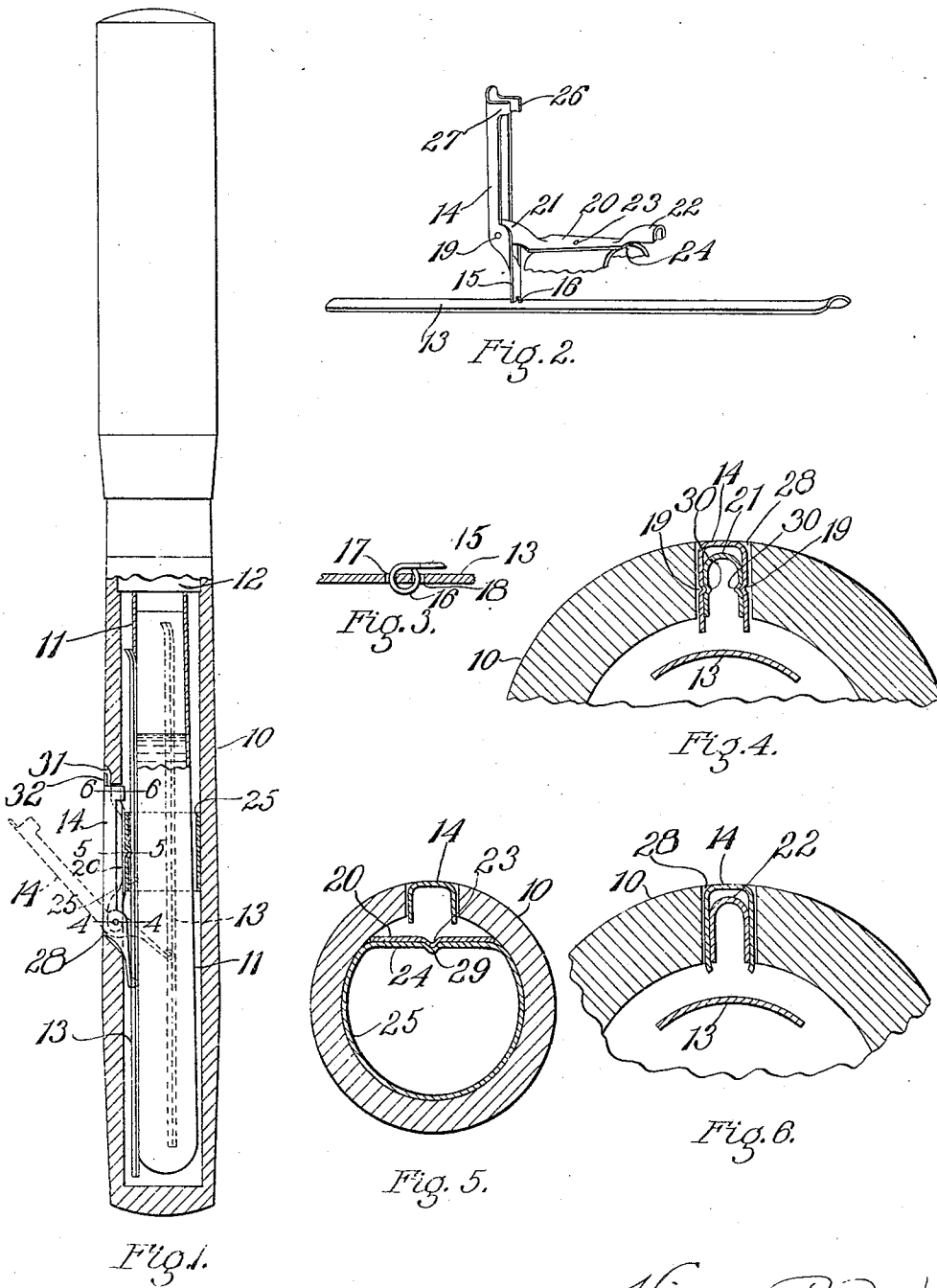
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W. P. DE WITT

LEVER FILLER FOUNTAIN PEN

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William P. De Witt  
By his attorney  
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# UNITED STATES PATENT OFFICE.

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## LEVER-FILLER FOUNTAIN PEN.

Application filed January 6, 1922. Serial No. 527,321.

*To all whom it may concern:*

Be it known that I, WILLIAM P. DE WITT, a citizen of the United States, residing at Somerville, in the county of Middlesex and State of Massachusetts, have invented new and useful Improvements in Lever-Filler Fountain Pens, of which the following is a specification.

This invention relates particularly to means for compressing the ink holding sack of a fountain pen, the object of the invention being to provide a cheap and easily constructed device, whereby the lever, which actuates the presser, may be pivotally and detachably connected to the casing without drilling holes in said casing.

The object of the invention is further to provide a lever and a support therefor which may be rigidly and securely positioned upon the casing of a fountain pen and yet may be easily attached to or detached therefrom.

Furthermore, the object of the invention is to provide a device of the character set forth which can be struck up out of sheet material by certain tools, thus greatly reducing the expense and greatly adding to the accuracy of the device.

The invention consists in the combination and arrangement of parts set forth in the following specification and particularly pointed out in the claims thereof.

Referring to the drawings:—

Figure 1 is a sectional elevation of a portion of a fountain pen casing with my improved sack compressing mechanism attached thereto.

Fig. 2 is a perspective view of the sack compressing mechanism, a portion of the same being broken away.

Fig. 3 is a detail longitudinal sectional elevation illustrating a portion of the presser bar and the manner of pivotally connecting the lever thereto.

Fig. 4 is a detail section taken on the line 4—4, Figure 1.

Fig. 5 is a detail section taken on the line 5—5, Figure 1 with the ink sack omitted.

Fig. 6 is a detail section taken on the line 6—6, Figure 1.

Like numerals refer to like parts throughout the several views of the drawings.

In the drawings, 10 is the casing of a fountain pen; 11 an ink sack; 12 a stationary member to which the open end of the

ink sack is secured. 13 is a presser bar which is pivotally connected to a lever 14. The lever 14 is U-shaped in cross section and is provided at one end thereof with a flattened portion 15 terminating in a hook 16 which extends through two holes 17 and 18 provided in the presser bar 13, the lever 14 is pivotally connected at 19 to a plate 20. The opposite ends of said plate 20 are U-shaped in cross section at 21 and 22 and said plate is connected, by a projection 23 formed thereon, to the flattened portion 24 of a split ring 25 which is located inside the casing 10 and is rigidly positioned in said casing by frictional contact with the inner surface thereof. The end of the lever 14, opposite to that at which said lever is pivoted to the plate 13, is provided with oppositely disposed ears 26 and 27, which, when the lever is located in the position illustrated in Figure 1, namely, within a slot 28 provided in the wall of the casing 10, are adapted to engage opposite sides of the U-shaped portion 22 of the plate 20, thus detachably engaging said plate and firmly positioning the lever 14 relatively thereto within the slot 28. The ears 26 and 27 are somewhat resilient so that they straddle and clasp the end 22 of the plate 20 as particularly shown in Fig. 6.

It will be understood that the ring 25 and the plate 20 are connected together by the projection 23 which is struck up on the plate 20 and projects into a similarly formed indentation 29 formed in the flattened portion of the ring 25. The portion 21 of the plate 20 is in a like manner connected to the lever 14 as illustrated in Fig. 4, in which the projections 19 on opposite sides of the U-shaped portion of said lever project into like formed indentations 30 formed in the opposite sides of the U-shaped portion 21 of the plate 20. All of these different projections and indentations are struck up on the parts described in a manner well known to those skilled in the art, thus doing away with all drilling and soldered portions, pivotal pins or the like, and firmly securing, by these means, the plate 20 to the ring 25 and the lever 14 to the plate 20.

The split ring 25 is used in that style of fountain pen in which the casing is made of hard rubber. In fountain pens having a metal casing the ring 25 may be dispensed with and the plate 20 secured to the metal casing by solder.

The general operation of the device hereinbefore described is as follows:—Assuming the parts to be in the relative positions illustrated in Figure 1 and it is desired to fill the sack 11 with ink, the lever 14 is pulled outwardly from the position shown in full lines, Figure 1, to the position shown in dotted lines, this operation being rendered easy and convenient by a notch 31 provided in the outside of the casing 10 and into which projects a finger piece 32 forming a part of the free end of the lever 14. When the lever 14 is thus operated, the end 15 of said lever, which is pivotally connected to the presser bar 13, will force said presser inwardly and thus compress the sack, the pen is then inserted in the ink and the lever moved from the dotted line to the full line position, Fig. 1, whereupon the partial vacuum in the sack 11 caused by the operation of the lever hereinbefore set forth will cause the ink to flow from its receptacle into said sack in a manner well known to those skilled in this art.

In the foregoing specification, the presser bar 13 is described as being pivotally connected to the lever 14 by means of a hook and the presser bar is therefore supported upon the lever. It is evident, however, that without departing from the spirit of my invention, the presser bar may be connected to or supported upon the casing of the pen 10 in any desirable manner, as for example, in the manner illustrated in United States Patent to S. Josselyn, No. 1,214,310, January 30, 1917, and if such a construction were used, the free end 16 of the lever 14 would bear against the outer face of the presser bar instead of being connected to it.

I claim:—

1. A fountain pen having, in combination, a casing, a sack of flexible material adapted to contain liquid and enclosed within said casing, open at one end thereof and closed at the opposite end, a presser located within

said casing and arranged to bear against said sack, a lever U-shaped in cross section pivotally connected to said presser and normally positioned in a slot provided in the wall of said casing and a plate rigidly positioned in said casing, the opposite ends of said plate being U-shaped in cross section, one U-shaped end of said plate projecting into a U-shaped portion of said lever to which it is pivotally connected, and a pair of oppositely disposed ears on the opposite end of said U-shaped lever adapted to engage opposite sides of the end of said plate opposite to that at which said lever is pivoted thereto, whereby said lever is held detachably engaged to said plate in said normal position.

2. A fountain pen having, in combination, a casing, a sack of flexible material adapted to contain liquid and enclosed within said casing, open at one end thereof and closed at the opposite end, a presser located within said casing and arranged to bear against said sack, a lever U-shaped in cross section pivotally connected to said presser and normally positioned in a slot provided in the wall of said casing and a plate rigidly positioned in said casing, the opposite ends of said plate being U-shaped in cross section, one U-shaped end of said plate projecting into a U-shaped portion of said lever to which it is pivotally connected by projections on one of said parts extending into indentations in the other of said parts, and a pair of oppositely disposed ears on the opposite end of said U-shaped lever adapted to engage opposite sides of the end of said plate opposite to that at which said lever is pivoted thereto, whereby said lever is held detachably engaged to said plate in said normal position.

In testimony whereof I have hereunto set my hand.

WILLIAM P. DE WITT.